

(S. B. 773)
(Conference)

(No. 33-2019)

(Approved May 22, 2019)

AN ACT

To set forth the public policy of the Government of Puerto Rico on climate change and on the mitigation, adaptation, and resilience processes per sector; establish a greenhouse gas emission inventory; direct the approval of a Climate Change Mitigation, Adaptation, and Resilience Plan per sector; establish specific initial reduction targets; create the Expert Advisory Committee on Climate Change and the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience of the Legislative Assembly, establish the functions and duties thereof directed to formulating and furthering the implementation of a public policy with quantifiable metrics; coordinate and integrate various sectors in the development of a strategy to combat the effects of climate change; amend subsection (d) of Section 3, and paragraph (2) of subsection (A) of Section 9 of Act No. 70-1992, as amended, known as the “Puerto Rico Solid Waste Reduction and Recycling Act,” in order to reduce the solid waste disposed in the landfills of Puerto Rico by sixty percent (60%); amend Section 1-A of Act No. 30-1997, as amended, to provide that beginning Fiscal Year 2018-2019, the vehicles to be acquired or the replacements thereof shall be hybrid or shall run on alternative fuel so that, by Fiscal Year 2027-2028, all vehicles acquired shall comply with these conditions; amend Sections 1.2 and 2.3 of Act No. 82-2010, as amended, known as the “Public Policy on Energy Diversification by Means of Sustainable and Alternative Renewable Energy in Puerto Rico Act,” in order to conform it to the energy public policy; amend Sections 5 and 9 of Act No. 114-2007, as amended, for the purpose of specifying the professionals authorized to install and certify the interconnection of photovoltaic power or renewable energy generation systems to the electric power grid; add a paragraph (64) to subsection (b) of Section 2.04 of Act No. 85-2018, known as the “Puerto Rico Education Reform Act,” in order to add the subjects of Climate Change Mitigation, Adaptation, and Resilience to the school curriculum; amend Section 5 of Act No. 83 of May 2, 1941, as amended, in order to direct the Electric Power Authority to assist the Experts and Advisors Committee on Climate Change on energy matters; and for other purposes.

STATEMENT OF MOTIVES

Climate change is a phenomenon that has a profound impact on our planet. The scientific community has concluded that global warming, in its most noticeable manifestation, is indisputably and fundamentally the result of the greenhouse gas emissions produced by the use of fossil fuels, and land-use changes. These changes have an impact on the culture, way of life, environment, biodiversity, economic models, mobility, trade, food, access to water and natural resources, infrastructure, and health. Its effects include changes in temperature, precipitation, humidity, winds, sea surface temperatures, ocean acidification, and an increase in extreme weather events, among others.

As a result of these weather and climate events, we have become vulnerable to droughts, floods, heat waves, and, most recently, of catastrophic hurricanes such as Irma and Maria. These last two cyclones have once again raised people's awareness of the importance of implementing measures to reduce the effects of climate change. In fact, various international research centers have stated that since 2013, atmospheric carbon dioxide (CO₂) concentrations have exceeded 400 ppm (parts per million), a threshold that had not been reached in over 800,000 years.

The effects of climate change and the need to act were first acknowledged at the international level in 1992 with the approval of the United Nations Framework Convention on Climate Change. It served as a basis for the signing of the Kyoto Protocol in 1997 seeking to limit and stabilize greenhouse gas concentrations in the atmosphere. Subsequent annual conferences held pursuant to the Kyoto Protocol established the guidelines that public policies must follow to achieve a reduction in greenhouse gas emissions and to formulate adaptation strategies for zones that are most vulnerable to the effects of climate change.

Despite these efforts, greenhouse gas emissions have increased globally year after year to the extent that it has raised concerns on the possibility of these changes being irreversible. As a result, the Paris Agreement was signed, and entered into force a year and a half ago. At that time, the global powers agreed on facing climate change together for the first time. The main goal of the Paris Agreement is to keep the global temperature rise well below 2 degrees Celsius (C⁰) above the pre-industrial level. Attaining this goal requires the application of real and effective measures to achieve a serious and sustained mitigation and the prompt development of new technologies to lessen the effects of greenhouse gas emissions in the atmosphere.

Certainly, combating climate change requires global powers to make their best efforts. However, Puerto Rico suffers the worst consequences from the adverse effects of climate change. The consequences of climate change on the Island include air pollution, greater exposure to Saharan dust plumes, an increase in wildfires, a decrease in precipitation and, consequently, long-term droughts, damage to coral reefs, an increase in saltwater intrusion into aquifers, greater reservoir sedimentation, increased water turbidity, an increase in extreme events such as hurricanes, floods, landslides, and vector-borne diseases.

Puerto Rico is physically and socially vulnerable to natural and anthropogenic hazards and threats. For the Caribbean, climate change is predicted to manifest as long-term and extreme droughts alternated with equally long and extreme periods of rain, and an increase in hurricane activity. At present, various studies predict that if sea levels continue to rise in Puerto Rico at a steady pace, without accelerating, the sea level shall be at least half (0.5) or one (1) meter higher by 2100. The damage that may ensue upon the sea level rise could affect life and property due to coastal erosion and lead to the loss of the natural coastal barriers. Likewise, a sea level rise would result in the loss of aquifers, property,

and even infrastructure use due to water entering the coastal areas. In addition, projections include a temperature increase of at least 0.8 °C (1.44 °F) by mid-century, up to a maximum increase of 2-5 °C (3.6-9 °F), and a decrease in precipitation of up to 50% by 2100. These are crucial issues and constitute a priority for the Government of Puerto Rico.

Multiple modern studies have shown and raised awareness of the adverse effects of not addressing climate change on the Island. For example, a report published in 2013 entitled: “Puerto Rico’s State of the Climate 2010-2013: Assessing Puerto Rico’s Social-Ecological Vulnerabilities in a Changing Climate,” which was a collaboration between various groups formed by the Puerto Rico Climate Change Council, and constituted by four working groups: Geophysical and Chemical Scientific Knowledge (WG1); Ecology and Biodiversity (WG2); Society and Economy (WG3), and Communicating Climate Change and Coastal Hazards (WG4). Likewise, the Climate Change Council published a compilation of data to be used as a guideline to achieve resilience, entitled “Ruta hacia la Resiliencia: Guía de Estrategias para la Adaptación al Cambio Climático en Puerto Rico,” (2015) [Route to Resilience: A Strategy Guide to Adapting to Climate Change in Puerto Rico (2015)] in conjunction many notable collaborators, to wit, the Intergovernmental Panel on Climate Change (IPCC), the National Oceanic and Atmospheric Administration (NOAA), the Puerto Rico Coastal Zone Management Program and the United Nations Framework Convention on Climate Change, among others. Also, Dr. Rafael Méndez-Tejada, the director of the Atmospheric Sciences Research Laboratory of the University of Puerto Rico, Carolina Campus, published a study entitled “Rango diario de temperaturas en Puerto Rico, 1950-2014” [Puerto Rico Diurnal Temperature Range, 1950-2014] which analyzed the historical data of 13 weather stations across the Island, and concluded that: “*the hot days have almost doubled the cold days. This data shows how the island has*

become warmer over the past years. In fact, the number of hot days has increased over 60% during the last fifty years.” [translation supplied] Moreover, the National Institute for Island Energy and Sustainability (INESI, Spanish acronym), presented the first edition of the “Catálogo de Recursos en Energía del Sistema de la Universidad de Puerto Rico (UPR)” [the University of Puerto Rico Energy Experts Catalogue] which compiles a list of over 60 experts from the University of Puerto Rico in order to contribute to the energy debate on the Island and to work on coordinating the First Interdisciplinary Congress on Energy and Sustainability in Puerto Rico to discuss energy policy.

Furthermore, the Department of Natural and Environmental Resources submitted a draft of the “Climate Change Adaptation Plan” in 2016, as provided in Executive Order OE-2013-016, in order to evaluate the different climate change scenarios, but the Plan was limited to the potential effects that climate change would have on the Department’s ability to render services and discharge its ministerial duty. The aforementioned Executive Order directed government agencies to conduct a Study on the Vulnerability of Public Infrastructure to Climate Change and to implement Adaptation Plans to counteract such findings. Likewise, legislation has been enacted to promote the use of renewable energy, recycling, the use of more efficient energy resources, and the use of vehicles that run on energy sources other than fossil fuels. However, Puerto Rico lacks a coordinated plan that integrates various sectors and directs efforts to evaluate whether the proposed metrics and targets are actually achieved.

Puerto Rico is no stranger to the effects of climate change on our environment. Studies show that our Island’s climate is changing and that the coastal communities, sea level, infrastructure, fauna, and ecosystems are vulnerable to such changes. Freshwater availability shall be reduced significantly as a result of the decrease in precipitation, the increase in saltwater intrusion into

aquifers, and the increase in reservoir sedimentation due to torrential rain. Moreover, these changes affect the availability of the food we consume and the health of our citizens. Greenhouse gas inventories show that carbon dioxide equivalent emissions reached 38,035,923.94 tons in 1990, and that they reached the equivalent of 46 million metric tons of carbon dioxide in 2013. The energy, transportation, and solid waste industries are the main producers of these emissions. Emissions are primarily produced by the burning of fossil fuels to generate electricity.

The energy sector produced over 15 million metric tons of carbon dioxide equivalent in 2015, which means that it was beyond the estimates of the “Puerto Rico GHG Baseline Report” submitted on September 2014 by the Center for Climate Change Strategies. This is the result of generating 98.1% of the Island’s electricity from fossil fuels. On the other hand, as to the transportation sector, there are over two million vehicles travelling in Puerto Rico which are powered by gasoline or diesel thereby producing emissions that affect our atmosphere. Likewise, there is a serious issue in the solid waste industry since only seven landfills are compliant with the Environmental Protection Agency standards and only 13% of all solid waste was recycled by 2013.

Data shows that by the mid-2000s, Puerto Rico’s gross greenhouse gas emissions were increasing at a higher rate than in the United States in general, with an 80% increase from 1990 to 2005 compared to national emissions which increased by 16% during that same period. The pressing need to draft a proposal directed to addressing the needs of each sector and evaluating the use of resources in order to achieve results, entails environmental effects that greatly affect the economic sector.

Recently, the United States Office of Management and Budget stated that extreme weather and wildfire events have cost the Federal government over \$350 billion and these costs will likely rise as the climate changes, according to the US Global Change Research Program. See, United States Government Accountability Office (GAO), “Climate Change Information on Potential Economic Effects Could Help Guide Federal Efforts to Reduce Fiscal Exposure,” GAO-17-720, September 2017, (hereinafter, GAO Report). As a result, the GAO Report concludes that climate change has a serious impact on the finances of the Federal Government. Moreover, it states that risk management efforts need to be focused where immediate attention is needed, and favor those activities or measures that have the greatest impact and maximize the efforts made to combat climate change. The report also stresses the need to establish a strategy to identify, prioritize, and guide federal investments to enhance resilience against future disasters.

Consistent with such report, the National Center for Environmental Information (NCEI), which compiles, monitors, and evaluates climate events in the United States and worldwide, has pointed out the great social and economic impact of these climate changes. Specifically, it states that, since 1980, the United States has sustained 218 weather and climate disasters where the overall damages/costs have reached or exceeded \$1 billion. In this sense, they have reported that “the total cost of these 218 events exceeds \$1.2 trillion. This total does not yet include the costs for Hurricanes Harvey, Irma, and Maria, which are being assessed and will be included in our 4th quarter release.” This year, as of October, 6, 2017, there were 15 weather and climate disaster events with losses exceeding \$1 billion each across the United States. These events included 1 drought event, 2 flooding events, 1 freeze event, 7 severe storm events, 3 tropical cyclone events, and 1 wildfire event. The 1980–2016 annual average is 5.5 events. However, the annual average

for the most recent 5 years (2012–2016) is 10.6 events which shows that the effects of climate change have doubled.

The distribution of damage from disaster events from 1980 to October 6, 2017, is dominated by tropical cyclone losses. Tropical cyclones have caused the most damage (\$583.5 billion) and also have the highest average event cost (\$16.7 billion per event). The average cost does not yet include the costs for hurricanes Harvey, Irma, and Maria which are still being assessed. Drought (\$235.3 billion), severe storms (\$201.6 billion), and inland flooding (\$119.3 billion) have also caused considerable damage and are on the list of billion-dollar events. Severe storms have caused the highest number of billion-dollar disaster events (90), while the average event cost is the lowest (\$2.2 billion). Tropical cyclones and flooding represent the second and third most frequent event types (38 and 28, respectively). Tropical cyclones are responsible for the highest number of deaths (3,427), followed by drought/heatwave events (2,993), and severe storms (1,578). See, NOAA National Centers for Environmental Information (NCEI), U.S. Billion-Dollar Weather and Climate Disasters (2017). <https://www.ncdc.noaa.gov/billions/>

The information provided reflects our new reality. As recently as last September, we suffered the onslaught of two severe weather events: hurricanes Irma and Maria. The increase in cyclone intensity and the frequency of these events is the result of various factors, among which it is worth noting the increase in sea surface temperature. This is how Puerto Rico suffers the direct effects of greenhouse gas emissions. The losses are numerous and the cost of global climate inaction for Puerto Rico in damages caused by hurricanes to the infrastructure, as well as the loss of revenues in the tourist sector, is projected to reach \$2.5 billion by 2050, and shall exceed \$5 billion by 2100, according to a study conducted by the Stockholm Environment Institute-U.S. Center, in partnership with Tufts

University. On November, the Government of Puerto Rico estimated that the damages caused by Hurricane Maria's onslaught on Puerto Rico amounted to \$94 billion.

The fight against climate change poses a serious challenge and it is necessary for all sectors to contribute because many of the policies to be developed by these government institutions affect the composition of the atmosphere and the capability to adapt to the impact of climate change. Inaction leaves us vulnerable to new events that directly affect our community surroundings and our economy, food, environment, and health.

This Act seeks to reduce greenhouse gas emissions, as well as our vulnerability to the impact of climate change. It also promotes and favors a transition to a model that is not dependent on fossil fuels to produce energy. To achieve this, we must eliminate coal-powered electricity generation, transition to a cleaner transportation system, and reduce solid waste disposal, among other initial proposals.

For such purposes, we establish real metrics and specific targets and guidelines to devise a Climate Change Mitigation, Adaptation, and Resilience Plan with the recommendations of a group of experts which shall constitute the Expert Advisory Committee on Climate Change. This Committee shall be responsible for evaluating and proposing better solutions to allow Puerto Rico to make a smart transition that promotes a sustainable future for various sectors, such as the energy, transportation, and food sectors, and self-sufficiency. This mitigation, adaptation, and resilience plan shall benefit from the coordination and involvement of various sectors and shall promote citizen, social, and financial participation and incentives. This measure seeks to improve our present and future public and environmental health while building towards sustainable development through mitigation and adaptation measures that shall make Puerto Rico more resilient and place it at the

forefront. Furthermore, this measure provides the means to implement effective tools that allow for the establishment of parameters and clear goals with regards to energy efficiency and the new Renewable Energy Portfolio pursuant to the Puerto Rico Energy Public Policy Act.

Likewise, this Act includes initiatives and recommendations that are the result of the efforts made by the Multi-sectoral Working Group to Mitigate Climate Change created by Executive Order 2018-45, as amended, whose purpose is to establish and recommend public policy initiatives aimed at protecting the environment and mitigating climate change. In its report entitled “Puerto Rico’s Blueprint for Climate Change Mitigation and Adaptation,” the Group details the pillars of and most important goals in addressing the issue of climate change in Puerto Rico, to wit: 1) achieving forty percent (40%) energy generation from renewable energy sources by 2023 and one hundred percent (100%) energy generation from renewable energy sources by 2050; 2) one hundred percent (100%) capital investment in resilient projects; 3) increasing reforestation by planting five hundred thousand (500,000) trees within five (5) years; 4) reducing emissions by fifty percent (50%) within five (5) years; 5) including the subjects of climate change mitigation, adaptation, and resiliency in the school curriculum; 6) a strong and resilient building code; 7) the creating a multi-sectoral group to monitor and update the public policy; 8) improving research on the subjects of erosion, conservation, water resource management, and contamination; 9) short-term interventions for beaches, reefs, and aquifers; and 10) reconstruction that focuses on innovation and resilience.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF PUERTO RICO:

Section 1.- Title.

This Act shall be known as the “Puerto Rico Climate Change Mitigation, Adaptation, and Resilience Act.”

Section 2.- Definitions.

For purposes of this Act, the following terms or phrases shall have the meanings stated below, except where the context clearly indicates otherwise, and the terms importing the singular shall include the plural form, and vice versa.

(a) **Adaptation.-** Means the ability of natural or human systems to adjust to climate change, or the effects thereof, which moderates harm or exploits beneficial opportunities.

(b) **Agency.-** Means any department, authority, board, commission, division, office, bureau, administration, public corporation or subsidiary thereof, or instrumentality of the Government of Puerto Rico, including any of its officials, employees, or members who act or appear to act while discharging their official duties, including municipalities, consortia, and municipal corporations.

(c) **Threat.-** Means any potential adverse effect related to climate change that may cause death, injuries, or other health issues, material damages, loss of means of livelihood and services, social and economic activity interruption, or environmental degradation.

(d) **Sea Level Rise.-** Means an increase in global average sea level brought about mainly by an thermal expansion that results from the warming of ocean water; it is also caused by the melting of ice caps and polar ice caps on land; and local factors such as coastal erosion, and land subsidence.

(e) **Climate Change.-** A statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period. This climate change may be due to natural internal processes or external forcings, or to persistent changes attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

(f) Global Warming.- Means an increase in the average temperature of the Earth.

(g) Anthropogenic Causes.- Means causes resulting from human activities or produced directly or indirectly by human beings.

(h) Community Engagement.- Means the involvement of representatives of all of the sectors of a community, including nongovernmental organizations, municipal governments, and the private sector, whether commercial or industrial, among others.

(i) Pollutant.- Means that substance introduced into the environment that has undesired effects or that negatively affects the usefulness of a resource.

(j) Zero Waste.- Means the combined efforts to eliminate waste to the greatest extent possible through recyclable materials, and other materials that may be reused, recycled, or degraded without affecting the environment, and includes the reduction of waste generated from materials used to manufacture a specific product.

(k) Carbon Dioxide.- Means the principal greenhouse gas that is naturally occurring and also a byproduct of burning fossil fuels, such as crude oil, natural gas, and coal, as well as land-use changes, solid waste incineration, and other industrial processes.

(l) Greenhouse Effect.- Means the process through which certain gasses absorb infrared radiation, emitted by the Earth's surface, thus increasing the temperature of the atmosphere and the oceans.

(m) Energy Efficiency.- Means the ratio of energy output of a conversion process or of a system to its energy input.

(n) Emissions.- Means the release of greenhouse gases, their precursors or aerosols into the atmosphere over a specified area and period of time.

(ñ) Alternative Energy.- Means energy derived from non-fossil fuel sources and not derived from solid waste conversion or incineration.

(o) Renewable Energy.- Means energy obtained from sustainable sources such as solar, hydro, ocean thermal energy conversion, wind, and biomass, and any other not derived from fossil fuels, or solid waste conversion or incineration.

(p) Extreme Weather Events or Phenomena.- Those that are capable of threatening the continuity of our society's operations and which push our response capacities to the limit.

(q) Greenhouse Gases (GHG).- Means gaseous constituents of the atmosphere that contribute to the greenhouse effect and are capable of absorbing infrared radiation, thus increasing and retaining heat in the atmosphere, including, carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (PFCs). These chemical compounds are measured in tons of carbon dioxide equivalent (CO₂e) per year. The CO₂e emissions represent the amount of GHGs emissions and shall be calculated pursuant to federal regulations.

(r) Environmental Tax.- Means the lien imposed on each carbon dioxide equivalent unit produced by a source subject to taxation.

(s) Infrastructure.- Means the basic equipment, public utilities, production companies, facilities, institutions, and essential services for the development, operations, and growth of the Island, including, but not limited to, streets, schools, electricity, gas, and water services, transportation, and communications.

(t) Mitigation.- Means measures and initiatives that limit or reduce anthropogenic greenhouse gas emission sources and enhance greenhouse gas sinks.

(u) Air Emission Permits.- Means an authorization to emit a specific amount of carbon dioxide equivalent or other greenhouse gases during a year.

(v) Resilience.- Means the ability of a natural or human system to resist, assimilate, and recover from any of the effects of the threats in a timely and efficient manner, thus maintaining or restoring its basic structures, identity, and essential functions.

(w) Resistance.- Means the ability of natural or human systems to withstand the effects of climate change.

(x) Vulnerability.- Means the degree a system is susceptible to, or unable to cope with, the adverse effects of climate change, including climate variability and extreme weather events. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.

Section 3.- Declaration of Public Policy.

Climate change poses a serious threat to Puerto Rico's social and economic wellbeing, public health, natural resources, and environment. It not only increases the sea level, but also reduces water resources, causes land subsidence, and has adverse effects on our surrounding resources, air quality, marine ecosystems, and the natural environment. Moreover, it shall affect the Island's economic development.

Global initiatives have been taken to limit global warming by reducing the mean temperature. In order to achieve this objective, the public policy of the Government of Puerto Rico is based on a profound and urgent commitment to implement an energy system with a reduced use of crude oil; eliminate coal-powered electricity generation; promote more efficient renewable or alternative energy systems; improve energy efficiency; reduce greenhouse gas emissions in the agricultural and livestock industries, and land-use changes, such as deforestation; promote the use of electric motor vehicles; improve urban planning; and promote the restoration of ecosystems to reduce carbon dioxide emissions.

Likewise, the Government of Puerto Rico recognizes its non-delegable responsibility to improve the decision-making process and implement measures that result in the best adaptation practices in the face of the challenges entailed by the negative effects of climate change.

Section 4.- Purposes.

This Act seeks to address the concerns regarding climate change. For such purposes, we promote the following:

1. To guarantee the right to a sound environment and establish the authorities to formulate and enforce public policy on climate change adaptation and greenhouse gas and compound emission mitigation.
2. To regulate greenhouse gas and compounds emissions to reduce the concentrations thereof thus preventing hazardous human intervention in the climate.
3. To reduce the vulnerability of the Island's population and ecosystems to the adverse effects of climate change.
4. To promote the transition to a competitive, sustainable, and low-carbon emission economy, with a decentralized electric power system and renewable energy sources geared toward substantially reducing the dependence on fossil fuels by 2035.
5. To adapt productive sectors and incorporate the climate resilience analysis into planning, activities, infrastructure, and buildings.
6. To promote education, research, development, and technology transfer, and disseminate climate change mitigation, adaptation, and resilience knowledge.
7. To establish mechanisms that furnish objective and ascertainable information on all that pertains to climate change, its evolution throughout time, and the impact thereof.

8. To promote the participation of citizens and economic and social agents in the formulation and evaluation of climate policy.

9. To set monitoring tools for greenhouse gas emissions across the different sectors, goods, and services.

Chapter I. Climate Change Mitigation, Adaptation, and Resilience

Section 5.- Initial Reduction Targets.

The purpose of the public policy on climate change is to achieve the following initial targets, among others:

1. To promote measures to collaborate in keeping global warming below 2 degrees Celsius (°C) above pre-industrial levels.

2. To achieve a fifty percent (50%) greenhouse gas emission reduction within the next five (5) years, in a real, permanent, quantifiable, and ascertainable manner.

3. To reduce general energy consumption by at least one percent (1%) annually, beginning in 2020, until achieving a ten percent (10%) reduction by 2030 based on population density.

4. To eliminate the use of fossil fuels in the energy sector, especially coal, for energy generation and, in lieu thereof, promote the use of renewable or alternative energy. To achieve this, public policies shall be promoted for the purpose of achieving twenty percent (20%) energy generation from renewable sources by 2022; forty percent (40%) from 2023 to 2025; sixty percent (60%) from 2026 to 2040; and one hundred percent (100%) from 2041 to 2050 pursuant to the new Renewable Portfolio Standard set forth in the Puerto Rico Energy Public Policy Act and Act No. 82-2010, as amended.

5. To prohibit the award of new contracts and/or the granting of new permits or the extension of existing contracts and/or permits to establish or to continue generating coal-based energy in Puerto Rico, in order to eliminate the dependence thereon by December 2027.

6. To reduce the current energy consumption on all public facilities.

7. To require for the approval of a building permit for any new single family home the inclusion of a solar water heater system that complies with the standards established through regulations. Variations may be accepted in the event that a duly licensed architect or engineer attests that: (a) the installation is not feasible due to the lack of solar energy as a resource; (b) the installation is extremely expensive, based on an analysis that considers the electric power expenditure compared to the cost of the solar water heater system; or (3) a renewable energy alternative exists to substitute it.

The procedure and cost to request the appropriate variation shall be prescribed through regulations by the Permit Management Office (OGPe).

8. To require the use of energy and water efficient systems, and high-efficiency air conditioners, or any system designed to reduce greenhouse gas emissions in the reconstruction, rehabilitation, and/or improvement of existing structures.

9. To acquire a Government fleet of fully hybrid vehicles or vehicles that run on alternative fuels, such as electricity, solar energy, hydrogen, and dual-fuel by 2028. To achieve this, the vehicles to be acquired for the Government fleet by procurement units as of the approval of this Act shall run on alternative fuels. The General Services Administration may grant a dispensation for the acquisition of vehicles that do not meet the specifications established in this Section when, as an

exception, the government agency, entity, body, office, department, or instrumentality justifies and substantiates its reasons for acquiring a different type of vehicle.

10. To gradually reduce by sixty percent (60%) the amount of solid waste currently disposed of in Puerto Rico's landfills by 2030.

11. To reduce the population's vulnerability to the reduction of water resources by implementing residential, commercial, and industrial water conservation programs; reducing water loss in the Aqueduct and Sewer Authority's (PRASA) distribution system; reusing PRASA's and the private sector's treated wastewater; harvesting rainwater, and protecting the aquifers and drainage basins.

12. To prioritize the dredging of strategic reservoirs as a short-term measure to increase water availability during droughts.

13. To promote reforestation by planting five hundred thousand (500,000) native and endemic trees within five (5) years.

14. To require the Department of Housing of Puerto Rico, through the use of available federal funds, to evaluate and develop programs to incentivize natural and juridical persons to acquire and install renewable energy equipment.

These targets shall be revised every five (5) years, and may only be modified before then if new knowledge was acquired that may substantially change the baseline parameters for decision-making.

Section 6.- Expert Advisory Committee on Climate Change.

For the purpose of effectively implementing the Government's general policy on climate change established herein, and to strategically set Puerto Rico on the right path, the Expert Advisory Committee on Climate Change attached to the Department of Natural Resources is hereby created as an entity with full autonomy and independence to address substantive matters, entrusted with the duty to advise

and devise the Climate Change Mitigation, Adaptation, and Resilience Plan to be evaluated by the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience.

(a) Appointment and Composition of the Committee.- The Expert Advisory Committee on Climate Change shall be composed of nine (9) members, three of which (3) shall be voting ex officio members. The ex officio members shall be the President of the University of Puerto Rico, the Secretary of the Department of Natural and Environmental Resources, who shall serve as the Committee Chair, and the Secretary of the Department of Economic Development and Commerce. All other members shall be appointed by the Governor of the Puerto Rico with the advice and consent of the Senate of Puerto Rico, and the House of Representatives of Puerto Rico. The members appointed by the Governor with the advice and consent of the Senate of Puerto Rico shall have an academic and professional background, or field experience as well as technical and scientific knowledge on atmospheric science (climatology and meteorology), natural science (environmental science, biology, ecology, physics, and chemistry), planning (environmental, economic, and urban), oceanography, public health (environmental health, epidemiology, demography), earth science (geography, hydrology, geomorphology, and geology), energy, sociology (environmental and socioeconomic repercussions), environmental engineering, and sustainable development. Moreover, at least one of the members shall be a renewable or alternative energy expert, and shall not be public employees, other than professors at the University of Puerto Rico. The vacancies shall be filled with a new appointment for the remainder of the original appointment. Vacancies shall be filled following the same process for making the original appointments.

Committee members shall be appointed within a term not to exceed three (3) months from the approval of this Act.

(b) **Organization and Quorum.-** The works of the Committee may be carried out in one or more working groups, whose composition and duties shall be determined by the Chair of the Committee.

Five (5) of the Committee members shall constitute a quorum for the transaction of its business and any other purpose. Every decision shall be made by not less than a majority vote of all of the members present at the meeting upon establishing a quorum, regardless of whether any of the members present abstained. A quorum shall be established at the beginning of the meeting and the meeting shall continue even if one of the members leaves after the meeting has begun. However, if a quorum cannot be established at the time of the voting, no decision shall be made.

(c) **Meetings.-** The Committee shall establish in its bylaws the manner and place where the meetings shall be held. Moreover, the Committee shall meet as often as necessary to achieve the objectives of this Act.

(d) **Continuity.-** The first members of the Expert Advisory Committee on Climate Change shall hold office until 2025, which is the year in which the first partial renewal of the Committee shall take place. In said year, two members shall be substituted as elected by the Governor of Puerto Rico. In 2027, two additional members shall be renewed from among the remaining members of the first Committee. In 2029, the two remaining members of the first Committee members shall be renewed, and so on and so forth, every two (2) years.

(e) **Finances.-** To achieve the purposes of this Act, the Office of Management and Budget shall allocate an annual budget as necessary for its operations, beginning Fiscal Year 2019-2020. Such funds shall be earmarked in the Joint Resolution of the General Budget of Puerto Rico.

(f) Ethical Responsibility.- The conduct of the members of the Committee and its staff shall be governed at all times by the public interest and the best practices to formulate policies on climate change mitigation, adaptation, and resilience, rather than by the pursuit of personal gain or profit for other natural or juridical persons. Moreover, Committee members shall be required to exhibit a conduct that avoids conflict of interest and ensures prompt clarification of any apparent conflict of interests that may call into question the loyalty and fiduciary duty of the Committee members and its staff with the interests pursued under the public policy set forth in this Act. Committee members shall be required to be duly prepared to attend regular and special meetings, and be able to deliberate on matters before their consideration. Likewise, Act No. 1-2012, as amended, known the “Puerto Rico Government Ethics Act of 2011,” shall apply to Committee members, as well as the officers, officials, and employees thereof, specifically the Code of Ethics provided for in Chapter IV of said statute.

Likewise, it is hereby provided that the Governor may dismiss any Committee member for the following reasons:

- (i) Unsatisfactory conduct, express professional incompetence or negligence in the discharge of their duties and functions;
- (ii) Disreputable or unlawful conduct;
- (iii) Conviction for a felony or misdemeanor involving moral depravity or crimes against the public treasury or duty;
- (iv) Malicious and willful interference with the duties of the Committee;
- (v) Working under the influence of alcohol or controlled substances;
- (vi) Fraud;

(vii) Violation of the “Puerto Rico Government Ethics Act of 2011,” Act No. 1-2012, as amended; or

(viii) Job abandonment.

Furthermore, a Committee member may be dismissed from office due to a physical or mental disability that impairs the member from discharging his functions, in which case it shall not be considered a dismissal.

The use and administration of the funds shall be subject to the rules on public funds use and disbursement. The Office of the Comptroller of Puerto Rico shall have jurisdiction over the Committee.

Section 7.- Duties and Powers of the Expert Advisory Committee on Climate Change.

The Expert Advisory Committee on Climate Change shall have the following duties:

(a) To submit a Climate Change Adaptation, Mitigation, and Resilience Plan, as provided in Sections 8 and 9 of this Act, to the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience of the Legislative Assembly. Said plan shall be feasible in order to achieve the objective of reducing greenhouse gas emissions and air pollutants by the prescribed dates, and propose the necessary measures, including environmental incentives, to achieve said objectives in a structured manner by establishing annual quantitative indicators of the impact that such measures have had.

To carry out this task, the Expert Advisory Committee on Climate Change may create working groups with specific tasks together with their respective timetables for the activities and projects to be developed. In turn, the Committee may promote community engagement, the participation of professionals, as well as of the best experts and institutions, and the social

involvement of the greatest number of stakeholders or interested parties of the concerned sectors.

(b) To coordinate with the Executive Branch, the Legislative Branch, public agencies, industry sectors, entrepreneurial groups, and environmental organizations any measures as are necessary to comply with the metrics established in this Act.

(c) To request that social and private sector organizations, as well as society in general, collaborate with proposals regarding the Climate Change Mitigation, Adaptation, and Resilience Plan.

(d) To contract professional and consulting services as needed to achieve the objectives of this Act.

(e) To examine and consider the work of leading professionals, organizations, or institutions on the subject matter of climate change, whether because they are related to national and international projects on climate change, or because they are renowned entities and experts.

(f) To prioritize actions according to the availability of economic resources, sector plans, and a cost-efficiency analysis.

(g) To follow-up on and oversee the implementation of climate change policies and the action plans of the sectors regarding aspects that are relevant to the achievement of the purposes of this Act. The Committee is hereby authorized and empowered to issue fines to any government agency, government entity, and public corporation that repeatedly fails to comply with the provisions of this Act and the implementation of the climate policies. For such purpose, regulations for the imposition of such fines shall be submitted to the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience, created pursuant to Section 16 of

this Act. The Joint Committee on Climate Change Mitigation, Adaptation, and Resilience shall approve the regulations. The monies received on account of fines shall be deposited in the Climate Change Fund.

Assessments shall be made through the appropriate annual revisions by submitting specific reports stating in detail the outcome and future needs. Based on these annual reports, the Expert Advisory Committee on Climate Change shall render a joint follow up and assessment report on the Climate Change Mitigation, Adaptation, and Resilience Plan to be submitted to the Legislative Assembly every three (3) years after the first Climate Change Mitigation, Adaptation, and Resilience Plan is duly approved. These three-year follow up and assessment reports shall serve to review the Plan itself as the general framework to carry out climate change socioeconomic impact, vulnerability, and adaptation evaluation activities.

(h) To draft and submit to the Office of the Governor, the Office of the Clerk of the House of Representatives, and the Office of the Secretary of the Senate of Puerto Rico a report on the specific contributions made by each economic sector.

(i) To disclose the finances, including the income and expenditures, the works, and the results obtained, as well as to publish an annual report on the activities, and the amount of emissions contributed per economic sector in Puerto Rico, namely, the tourism, agriculture, transportation, pharmaceutical, construction, manufacturing, and energy sectors, and the Government.

(j) To propose and support innovation, research, development, and technology transfer projects and studies in connection with climate change. For such purpose, the execution of collaborative agreements with the University of Puerto Rico and any other academic institution is hereby authorized.

(k) To hold public educational workshops on climate change, the effects and implications thereof, and the greenhouse gas emissions reduction measures that may be implemented.

(l) To procure the financial resources that may be required from contributions or donations made by organizations, institutions, private entities, citizens and associations concerned with different sectors and systems, to be evaluated and transferred to the Climate Change Fund created in Section 15 of this Act.

(m) To create joint work committees at the municipal level for specific subjects related to climate change while taking into consideration the impact thereof on coastal municipalities as well as on those municipalities that are located in the drainage basins that provide an important water supply for humans and agriculture, in order to further the objectives of this Act.

(n) To promote sound collaboration structures to achieve resilience through strategies directed at identifying and training community leaders, decentralizing the decision-making process, and integrating and strengthening the networks of existing community-based organizations.

(o) To enable the development of the capacity of vulnerable communities and areas to implement and monitor programs related to climate change.

(p) To create and publish updated risk maps, public protection plans, and relocation and evacuation plans for vulnerable areas.

(q) To support adaptive management in a changing climate through integrated observation and monitoring, and through the use of support tools to make smart decisions.

Section 8.- Climate Change Mitigation, Adaptation, and Resilience Plan Strategic Framework.

The Climate Change Mitigation, Adaptation, and Resilience Plan shall set the objectives for greenhouse gas emissions and air pollutants by periods, along with a proposal including the necessary measures to attain such objectives in a well-planned manner and establishing the corresponding environmental tax as well as the annual quantitative indicators of the impact of the actions taken. In order to attain these objectives and promote community engagement, the involvement of local entities and other stakeholders shall be ensured. This strategic framework, itemized by sectors, shall be mandatory. Likewise, the most vulnerable natural systems, territories, and socioeconomic sectors shall be identified in a proposal that includes the required adaptation measures to reduce their vulnerability. The foregoing shall include zones with a high rate of coastal erosion, areas at a higher risk of coastal flooding caused by storm surges associated with cyclones and cold fronts, areas at a high risk of flooding due to river discharge, zones that are highly susceptible to flooding as a result of the sea level rise, areas that are prone to water rationing, areas where economic development is compromised or could be compromised due to a lack of water, aquifers that are in a critical state, and reservoirs whose storage capacity has been reduced due to sedimentation or due to dam structural damage, among others. The foregoing shall be identified for the purpose of evaluating possible solutions to these problems and any other environmental problems that warrant the attention of all interest groups.

The Expert Advisory Committee on Climate Change shall submit the Climate Change Mitigation, Adaptation, and Resilience Plan for the evaluation of the Legislative Assembly within one (1) year as of the effective date of this Act, in order to attain the initial targets set forth in Section 5 of this Act. The Expert Advisory Committee on Climate Change shall ensure that the Climate Change

Mitigation, Adaptation, and Resilience Plan is consistent with the Integrated Resource Plan approved by the Puerto Rico Energy Bureau and the Puerto Rico Energy Public Policy Act.

Section 9.- Climate Change Mitigation, Adaptation, and Resilience Plan Measures.

For the purpose of attaining the reduction targets of this Act, the measures to be adopted within the Climate Change Mitigation, Adaptation, and Resilience Plan shall be geared toward reducing vulnerability, greenhouse gas emissions, food waste, and resource consumption.

The Plan shall establish the thresholds for the greenhouse gas emissions, established in definition (ñ) [sic] of Section 2, allowed to the applicable sectors. Furthermore, the Plan shall prioritize drainage basin and coastal management. The Plan shall also apply to different sectors in accordance with the following guidelines:

a) Energy

1. To adopt measures geared to energy transition, to a renewable or alternative energy model, eliminating coal as a source of energy in order to transform the energy generation process into a greenhouse-neutral process, which reduces the vulnerability of the energy system and guarantees access to energy for the common good.

2. To promote energy efficiency and energy saving policies. In order to do so, a surcharge model shall be established as a penalty for energy overuse.

3. To promote the renewable or alternative energy that must be developed, to the extent possible, capitalizing on spaces already altered by human activity, thus minimizing the unnecessary use of land.

4. To further an energy model that seeks to eliminate fossil fuel usage to increase the share of renewable or alternative energy in the electric power system.

5. To adopt measures that foster and promote energy self-consumption based on renewable or alternative energy, as well as the involvement of local stakeholders in the production and distribution thereof.

6. To promote distributed energy generation and new options for distribution and supply contracting, and the implementation of smart and closed distribution grids.

7. To incorporate the emission reduction targets set forth in this Act.

b) Infrastructure

1. To incentivize and promote structures that are designed, built, and certified by any energy conservation, water consumption, and air-conditioning standards, such as the following entities: Leadership in Energy and Environmental Design Green Building Rating System (LEED), the rating system of the Green Building Council such as the Performance Excellence in Electricity Renewal (PEER), the Energy Efficiency Standards of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) or the International Energy Conservation Code, or other standard developed by a nonprofit entity and widely accepted by the scientific community. A resilient Building Code shall be developed and the need to and convenience of integrating the International Code Council's "Green Code" therein, or the adoption of similar regulations that are appropriate for Puerto Rico shall be evaluated.

2. To encourage that any construction, reconstruction, rehabilitation of, and/or improvement to any existing structure promotes the use of efficient energy, water, and air-conditioning systems or those designed to reduce

greenhouse gas emissions by granting a credit for the cost of duly-approved equipment.

3. To develop measures that incorporate within the environmental plan evaluation framework and the definition of emission reduction targets, an assessment of its vulnerability to the impact of climate change and the establishment of a follow-up mechanism in the construction projects of new port, airport, transport, energy, waste, and water infrastructure developed in Puerto Rico. This analysis must evaluate, at least, the impact of extreme weather events on the new infrastructure and the lack of supplies.

4. To adopt processes that may be applied economically and environmentally to the construction and conservation of highways to offset climate change.

5. To promote applications for Green Permits provided in Act No. 161-2009, as amended, known as the “Puerto Rico Permit Process Reform Act.”

6. To adapt urban development and energy regulations so as to make new residential areas energy self-sufficient and to design such areas in accordance with the following priority criteria: to reduce energy demand; to design efficient systems that respond to the energy demand; to capitalize on local energy resources; and to promote the use of low-impact construction materials. To establish metrics to determine the specific energy consumption reduction target at a residential level.

7. To identify and classify spaces already developed or occupied by infrastructure and services with potential to establish or share surfaces to attract and develop renewable energy projects.

8. To encourage professionals engaged in the design, planning, and construction of residential areas to use renewable or alternative energy for cooling systems and water heating systems, in addition to constructive solutions whether structural or highly energy-efficient fixtures.

9. To promote adaptation actions such as furthering green infrastructure in Puerto Rico for the social, economic, and government sectors of the island.

10. To promote the planning and design of sustainable tourist facilities and initiatives, such as green design and operating guidelines, through the Puerto Rico Green Lodging Program, among other initiatives.

c) Transportation and Mobility

1. To adopt transportation and mobility measures aimed at reducing vulnerability and greenhouse gas emissions, and advancing toward a public, mass, and intermodal transit model that promotes the general use of public transport and other forms of sustainable transport without greenhouse gas emissions.

2. To encourage a reduction in the use of private transport in order to promote the use of public transport infrastructures.

3. To promote the use of energy efficient vehicles and energy diversification through financial and administrative incentives for consumers. For such purpose, the feasibility and convenience of establishing a refund for the excise tax paid when purchasing a vehicle propelled by alternative or combined energy, or any other method that incentivizes the acquisition of these types of vehicles shall be evaluated.

4. To promote priority, free, or reduced-rate parking spaces for hybrid vehicles or for those that run on alternative energy sources, including reduced parking rates and the availability of priority parking spaces, among others.

5. To guarantee the development of electricity infrastructure with sufficient capacity to respond to the additional electricity demand that shall result from the transition to electric vehicles and that may be adapted to electric mobility and transport electrification.

6. To evaluate the use of other technologies not dependent on fossil fuels for public transport vehicles.

d) Waste

1. To reduce the population's vulnerability, as well as the greenhouse gas emissions by prioritizing the zero-waste strategy, in order to save waste material and reduce the processing thereof, and implement measures to achieve a sixty percent-(60%) reduction of all waste disposed of in landfills by 2030.

2. To promote the implementation of a Multi-Sectoral Recycling Plan to Reduce, Reuse and Recycle in order to achieve the goal of reducing the amount of solid waste disposed of in the landfills of Puerto Rico. Said plan shall take into account the waste and debris generated during the recovery process for hurricanes Irma and Maria and shall establish a hierarchy with respect to the waste-related options that includes: prevention, preparation for reuse, recycling, and disposal of certain waste. The aforementioned plan shall include an absolute ban on single-use plastic and polystyrene products which shall take effect in three (3) years. The Expert Advisory Committee on Climate Change shall specify the products that shall be banned, while taking into account the feasibility of acquiring substitutes for such products and their market availability.

3. To promote and incentivize, as a priority, alternatives to the incineration of solid waste that cannot be reused or recycled, and the recycling or re-refining of special waste, as these are defined by the Department of Natural and

Environmental Resources, to prevent the greenhouse gas emissions from incineration.

4. To promote the best solid waste management practices (e.g. the proximity to drinking water supply sources, and corrosion-resistant containers so as to avoid obstructions created by solid waste.)

5. To promote community education, in conjunction with the Department of Natural and Environmental Resources, in order to reduce waste generation through sustainable consumption and the reduction of consumption in general.

6. To progressively ban the burning of used oil thereby completely eliminating this practice by 2021.

e) Health

1. To implement measures that identify and evaluate the effects of climate change on the health of the people, in order to adopt and apply preventive measures with regard to such effects, including measures relating to vector-borne diseases, water and air quality, protection during heat waves, as well as food-related measures in light of any climate change effects that may affect food safety.

2. To raise the people's awareness of climate change-related health risks.

3. To prepare special protection plans for the most vulnerable high-risk groups.

4. In conjunction with the Municipal Governments, to use the demographic profile and social analysis of municipal areas to assess which demographic areas are more vulnerable in terms of health. This shall serve as a general action plan geared to the adaptation of the public health of communities.

f) Agriculture and Animal Husbandry

1. To promote the modernization of irrigation systems that allow for a better and rational use of water, with the highest energy efficiency.
2. To promote the valuation of species or varieties, mainly endemic, that are more capable of adapting to new climate conditions.
3. To incentivize the gradual use of organic fertilizers in lieu of chemical fertilizers.
4. To create a vulnerability map of the crops and animal species that are more susceptible to foreseen climate impact.
5. To implement measures that prevent soil degradation and that facilitate soil carbon sequestration by improving organic matter production, cover cropping, and conservation tillage.
6. To promote and incentivize the replacement of agricultural equipment, so as to incorporate new energy saving and cleaner technologies that reduce greenhouse gas emissions.
7. To promote local/urban agriculture and expand the use of agriculture thus protecting resources, specifically water.
8. To repair the irrigation canals to substantially reduce the current water loss.

g) Water

1. To recover and preserve the quality of surface waters, aquifers, and groundwater for droughts periods and climate change effects.
2. To improve water conservation, quality, and efficiency.
3. To establish and develop the guidelines that shall be followed to assess the rainwater harvesting and use systems of any newly-built housing or building starting in 2020.

4. To establish and protect rainwater harvesting areas across Puerto Rico.

5. To redefine how the treated waters produced by the Aqueduct and Sewer Authority water treatment plants shall be reused.

6. To reduce the loss of drinking water by promoting the use of water-efficient equipment in new housing, commercial, and industrial projects.

7. To promote and incentivize the replacement of existing devices or equipment for more water-efficient variations in new housing, commercial, and industrial projects.

8. To foster the use of technology and modern techniques to identify water loss at the locations of the Aqueduct and Sewer Authority distribution systems in order to reduce said losses.

9. To identify and protect aquifer recharge areas.

h) Marine Systems and Coastal Zones.

1. To promote the reestablishment, conservation, and sustainability efforts of coral reefs, and coastal and marine ecosystems to halt climate change effects as well as actions to prevent the destruction, overexploitation, and pollution of habitats and other anthropogenic causes.

2. To foster low-impact fishing practices.

3. To promote the people's sensitivity and awareness in order to improve public understanding of the ocean's conditions and the impact thereon.

4. To create and effectively implement a marine protected area network in order to halt biodiversity loss and improve marine ecosystem resilience.

5. To promote the development of specific scientific and technical tools that support the implementation of policies and action strategies on the coasts as a result of climate change.

6. To propose an indicator and index system that provides objective data for the formulation of policies and action strategies to correct, mitigate, and prevent the effects of climate change on the coast.

7. To address coastal erosion as a priority and employ mitigation, adaptation, and resilience strategies as an alternative to reduce the vulnerability to other climate change effects such as tides, flooding, and sea level rise.

8. To direct efforts to the restoration of coral reefs and other habitats that are critical for ecosystem services.

9. In conjunction with the Planning Board, to implement coastal planning that takes into account the sea level rise and direct that any new developments be constructed away from the coast.

10. To identify high biodiversity areas and areas with live corals so as to provide them with additional protection, and to expand existing protected areas in order to include them.

i) Forestry

1. To define and undertake forestry efforts to increase the resistance and resilience of green spaces to climate change impact.

2. To support forestry efforts that seek to reduce the risk of wildfire and the maximization of forest areas.

3. To support studies and protocols that may be employed in order to identify the most drought or heat tolerant tropical plants.

4. To promote reforestation in the drainage basins.

5. To promote reforestation by planting trees.

j) Tourism

1. To develop a tourism model that evaluates new situations, whether these are opportunities or threats arising from climate change impact.

2. To devise a plan that incorporates the evaluation of specific measures to guarantee utility services during peak tourist seasons. These basic services include the drinking water supply, energy supply, waste disposal, recycling, transport facilitation, waste water treatment, and primary healthcare.

3. To promote the education and sensitivity among tourism providers, leaders, and personnel, as well as tourists.

k) Education

1. To further climate change, recycling, and water and energy conservation knowledge, and the integration of the best practices in this field, including, research or analysis on the climate, the effects of climate change on terrestrial and marine ecosystems, water resources, energy efficiency, renewable energy, climate change mitigation and adaptation, and economic instruments with a direct or indirect impact on climate change.

2. To increase the information and knowledge about the impact of climate change on fish, wildlife, and plants.

3. To promote greater community education on the importance of habitats for terrestrial and marine species, particularly those that are vulnerable or endangered.

Section 10.- Greenhouse Gas Emission Inventory.

The Department of Natural and Environmental Resources or the entity with jurisdiction over environmental issues shall compile and publish annually a Puerto Rico greenhouse gas emission inventory per type and source. The inventory shall include the “basket” of six (6) greenhouse gases, to wit, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and hydrofluorocarbons (HFCs) which are measured in tons of carbon dioxide equivalent (CO₂e).

Chapter II – Incentive for Climate Change Measures and Efforts

Section 11.- Government, Agencies, Instrumentalities, Entities, and Public Corporations.

It is the duty of the Government, its agencies, instrumentalities, entities, and any other to which it delegates, to undertake a planning process to formulate climate policies, make efforts to manage the various effects of climate change, establish strategies for the mitigation of and adaptation and resilience to such events, which shall include targets for the minimum water reduction percentage, the mitigation of greenhouse gas emissions in all generating sectors, and the adaptation to climate change impacts on natural systems and socioeconomic sectors. Said planning, which shall be included in the land use plans, shall establish targets and general measures including, at least, those provided in this Act.

In carrying out said duty, the Government shall periodically set benchmarks for minimum renewable or alternative energy percentage of consumption for public facilities owned and leased by the government; provided, that the terms of the contract allow for the attainment of these objectives. Furthermore, the Government shall facilitate the issuance of permits to promote the use of renewable or alternative energy. Every permit or authorization requested or required by the Government shall be evaluated and granted in accordance with the federal and state laws and regulations that apply to such project or activity.

To attain these objectives, all government contracting processes shall include, as appropriate, technical specifications and specific award criteria with regard to the efficient use of resources and the minimization of greenhouse gas emissions. When calculating the cost of investment, exploitation, and maintenance of the object of the contract, the resource use and gas emissions shall be quantified.

Public fund management requires the publication of a report stating the progress toward achieving the objectives including, but not limited to, energy savings and efficiency measures and water usage in their buildings, waste reduction measures, the energy efficiency of their facilities, renewable energy implementation measures, mass transit measures, if feasible, and measures for the import of low-carbon dioxide emission, electric, or hybrid vehicles.

Section 12.- General Incentive Objectives

The Government shall provide in the Climate Change Mitigation, Adaptation, and Resilience Plan, for the imposition of a lien on such actions that increase the vulnerability or greenhouse gas emissions and shall financially incentivize such actions that promote the adaptation to climate change or the reduction of greenhouse gas emissions insofar as it is technically and financially feasible.

The current collaboration framework shall encourage local entities, within the scope of their authority, to formulate a fiscal policy to incentivize actions that allow for the effective enforcement of climate change adaptation and mitigation policies, such as: a) the promotion of renewable or alternative energy and distributed generation; b) network decentralization and energy self-consumption; c) energy efficient housing and equipment; d) water conservation and rainwater harvesting; e) waste generation prevention; and f) any other that furthers the objectives and the public policy set forth in this Act.

Section 13.- Air Emission Permits

Air emission permits, which constitute a planning and follow-up mechanism to integrate the objectives of this Act to sectoral policies, shall be established in accordance with the recommendations of the Expert Advisory Committee on Climate Change. Through such permits, a threshold on greenhouse gas emission per sector is approved. Thus, other factors such as scientific knowledge, the impact

on different sectors and the reduction potential in each sector, social and financial circumstances, competitiveness, energy policy, and national and international movements addressing climate change shall be taken into consideration. Air emission permits shall be issued every three (3) years for the different sectors.

Section 14.- Climate Change Funds.

The Expert Advisory Committee on Climate Change may receive funds for:

- 1) promoting renewable or alternative energy and energy efficiency;
- 2) eradicating carbon and reducing the use of crude oil as a fossil fuel to produce energy;
- 3) water efficiency and conservation;
- 4) ensuring the protection of the population in the face of the increasing risk of extreme weather events;
- 5) modifying production processes to reduce pollutant emissions;
- 6) transforming the agri-industrial model into a new model that guarantees food sovereignty;
- 7) research and investigation on climate change;
- 8) climate change awareness, information, and education;
- 9) rainwater harvesting and use;
- 10) reforestation; and
- 11) any other initiatives as needed to attain the objectives of this Act, among others.

Without it being construed as a limitation, the aforementioned funds may be derived from the following economic resources:

1. Any donation by any public or private entity, persons, or individuals. The Secretary of the Department of the Treasury of Puerto Rico is hereby directed, as of 2019 which is the year in which the 2018 income tax returns are filed, to include a line whereby taxpayers may donate money to the Climate Change Fund.
2. Any other source of financial resources that the Government deems necessary.

Chapter III - Joint Committee on Climate Change Mitigation,
Adaptation, and Resilience

Section 15.- Joint Committee on Climate Change Mitigation, Adaptation, and Resilience.

The Joint Committee on Climate Change Mitigation, Adaptation, and Resilience of the Legislative Assembly of Puerto Rico is hereby created. The Joint Committee shall be composed of seven (7) senators and seven (7) representatives.

Among the members of the Committee, there shall be appointed one (1) member of each of the minority parties represented in each Legislative Body. Initially, the Chair of the Joint Committee shall be the senator designated by the President of the Senate of Puerto Rico. Said designation shall be made every four-year term alternating between the Senate and the House of Representatives of Puerto Rico.

The Joint Committee shall have jurisdiction to:

(a) Study, evaluate, report on, make recommendations for, amend, and approve the Climate Change Mitigation, Adaptation, and Resilience Plan submitted by the Expert Advisory Committee on Climate Change, as provided for in this Act, to each House of the Legislative Assembly. For such purposes, it is hereby provided that once the Climate Change Mitigation, Adaptation, and Resilience Plan is recommended in accordance with Section 7 of this Act, the Joint Committee shall submit the Plan simultaneously to both Houses of the Legislative Assembly by the end of the next Regular Session;

(b) Examine, research, evaluate, and study all that pertains to climate change mitigation, adaptation, and resilience;

(c) Periodically follow up on the actions taken to implement the Climate Change Mitigation, Adaptation, and Resilience Plan and any proposal related to the purposes of this Act to reduce greenhouse gas emissions and to transition into renewable energy and adaptation strategies;

(d) Evaluate all climate change-related measures introduced in both Legislative Houses and submit a report of such evaluations to the Legislative Assembly;

(e) Draft, introduce, and amend bills, resolutions, and substitute measures relating to climate change and the effects thereof on different sectors;

(f) Recommend the uses of funds in the General Fund to enforce the public policy set forth in this Act;

(g) Discharge any other function assigned by Concurrent Resolution.

Provided, further, that the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience shall revise the need and convenience of this Act every three (3) years by filing a report with the Governor and the Presiding Officers of the Legislative Assembly.

The Joint Committee shall approve bylaws within a term not to exceed thirty (30) days as of the approval of this Act. Such Bylaws shall include rules, procedures, and considerations as needed to carry out the different tasks assigned thereto. The Joint Committee created herein shall draft and file reports as needed in order to inform both Houses of the Legislative Assembly of their findings, recommendations, and conclusions while carrying out their functions.

The personnel of the Joint Committee shall be subject to the provisions of the Personnel Regulations of each House of the Legislative Assembly, depending on who chairs the Committee.

Section 16.- Approval of the Climate Change Mitigation, Adaptation, and Resilience Plan.

Once the Climate Change Mitigation, Adaptation, and Resilience Plan is approved by the Joint Committee on Climate Change Mitigation, Adaptation, and Resilience, as provided in Section 16 of this Act, such Plan shall be introduced in each House of the Legislative Assembly for consideration during the Regular Session in which the plan is submitted. If approved by both Houses, the Plan shall be delivered to the Governor of Puerto Rico for his signature, using the same process followed for any other bill. If, by the close of the Regular Session during which the Plan is under consideration, the Legislative Assembly has failed to act on the Climate Change Mitigation, Adaptation, and Resilience Plan, the plan shall be deemed to be approved and shall be presented to the Governor of Puerto Rico for his signature or veto.

Chapter IV – Amendments to Provisions in Effect

Section 17.- Subsection (d) of Section 3 and paragraph (2) of subsection (A) of Section 9 of Act No. 70-1992, as amended, are hereby amended to read as follows:

“Section 3.- Declaration of Public Policy.

It shall be the public policy of the Commonwealth of Puerto Rico to develop and implement financially viable and environmentally safe strategies that shall result in a reduction of the volume of solid waste that requires final disposal.

...

(a) ...

(b) ...

(c) ...

(d) the recovery of energy from solid waste that cannot be reused or recycled, provided that the energy recovery facility does not generate greenhouse gas emissions, and preserves the quality of the air, water, soil, and other natural resources, and

(e) ...”

Section 9.- Solid Waste Reduction and Recycling Program.

(A) The Program to be developed and implemented by the Authority shall:

(1) Establish guidelines for the collection, transportation, storage, separation, processing, reduction, and recycling of the materials mentioned in Section 7 of this Act, throughout the Government of Puerto Rico.

(2) Establish mechanisms to guarantee that the solid waste disposed in the landfills of Puerto Rico be reduced by sixty percent (60%) by 2030; therefore, it is hereby promoted that solid waste shall be processed through the reduction and recycling method.

(3) Promote the establishment of facilities for the collection, processing, and marketing of recyclable material, through the development of adequate infrastructure and the strengthening of the market for recycled material.

...”

Section 18.- Section 1-A of Act No. 30-1997, as amended, is hereby amended to read as follows:

“Section 1-A. Public Policy on Vehicle Procurement.

Every agency, entity, body, office, department, instrumentality, and municipality or other government subdivision, including those entities listed in Section 2 of this Act, is hereby directed to comply with the public policy on the procurement of hybrid vehicles or vehicles that use alternative fuel other than fossil fuels, such as electricity, solar power, hydrogen, and bi-fuel.

To implement this public policy on procurement, every agency, entity, body, office, department, or instrumentality is hereby directed to adopt and comply with the rules and guidelines for the acquisition of such vehicles, which shall be established by the General Services Administration.

The rules and guidelines promulgated by the General Services Administration and by municipal legislatures with the advice of such agency, shall contain, without it being construed as a limitation, the adoption of specifications for 'clean motor vehicles,' as such term is defined in Section 301 of the Energy Policy Act of 1992, P.L. 102-486, and that produce emissions that do not exceed the limits set under the National Law Emission Program, 40 C.F.R., Part 86.

Every agency, entity, body, office, department, or instrumentality shall be required to adjust their procurement procedures to the rules and guidelines issued by the General Services Administration to ensure that by Fiscal Year 2010-2011, at least twenty-five percent (25%) of the acquired vehicles meets the specifications provided in this Section, and that by Fiscal Year 2012-2013, at least fifty percent (50%) of the acquired vehicles meets such specifications. Beginning Fiscal Year 2019-2020, vehicles shall be progressively acquired or substituted for other vehicles that are either hybrid or run on alternative fuels, such as electricity, solar power, hydrogen, or bi-fuel. The General Services Administration may grant a dispensation to acquire motor vehicles that do not meet the specifications set forth in this Section, when as an exemption, the Government agency, entity, body, office, department, or instrumentality justifies and supports the reasons for acquiring a different type of vehicle. By Fiscal Year 2027-2028, all vehicles acquired shall comply with said specifications. The General Services Administration shall be subject to fines if it repeatedly fails to comply with the mandate established in Section 1-A.

In the case of municipalities, each municipal legislature shall approve an ordinance establishing the dates on which the twenty-five percent (25%) and fifty percent (50%) compliance shall be achieved, in accordance with the provisions of this section. In no case shall the dates established through municipal ordinance to attain the twenty-five percent (25%) compliance goal be later than Fiscal Year 2011-2012, nor the date set to achieve the fifty percent (50%) compliance goal be later than Fiscal Year 2013-2014. Beginning Fiscal Year 2018-2019, the vehicles to be acquired or the replacements thereof shall be hybrid or shall run on alternative fuels, such as electricity, solar power, hydrogen, and bi-fuel, provided that the Municipal Legislature grants an exemption for a period of time. By Fiscal Year 2027-2028, all vehicles acquired shall comply with said specifications. Fines shall be imposed for repeated failure to comply with this Section.

The General Services Administration may grant a dispensation to acquire motor vehicles that do not meet the specifications set forth in this Section, when as an exemption, the Government agency, entity, body, office, department, or instrumentality justifies and supports the reasons for acquiring a different type of vehicle. In the case of municipalities, municipal legislatures may grant through ordinance a dispensation to acquire vehicles that do not meet the specifications established in this section, under the same conditions provided for the General Services Administration.”

Section 19.- Section 1.2 of Act No. 82-2010, as amended, is hereby amended to read as follows:

“Section 1.2.- Declaration of Public Policy.

It is hereby declared as the public policy of the Government of Puerto Rico to achieve the diversification of energy sources and energy technology infrastructure by reducing our dependency on energy sources derived from fossil fuels such as crude oil and coal; reducing and stabilizing our energy costs;

controlling electricity price volatility in Puerto Rico; reducing the flight of capital caused by the import of fossil fuels; preserving and improving our environment, natural resources, and quality of life; promoting the conservation of energy and social wellbeing through various mechanisms such as setting and achieving goals within a mandatory timetable schedule, and economic and tax incentives to stimulate the generation of electric power through sustainable and alternative renewable energy sources. For such purposes, the Government of Puerto Rico hereby adopts a Renewable Portfolio Standard with a compliance timetable that shall apply to every retail electricity supplier in Puerto Rico.”

Section 20.- Section 2.3 of Act No. 82-2010, as amended, is hereby amended to read as follows:

“Section 2.3.- Renewable Portfolio Standard

(a) For each calendar year between 2015 and 2050, each retail electricity supplier shall submit to the Commission proof of compliance with the Renewable Portfolio Standard applicable under subsection (b) of this Section.

(b) For each calendar year between 2015 and 2050, the Renewable Portfolio Standard applicable to each retail electricity supplier shall be the following percentage at minimum:

Year	Required Renewable Energy Percentage (%)
2015 to 2022	20.0%
2023 to 2025	40%
2026 to 2040	60%
2041 to 2050	100%

The required percentage shall be met by the last year of the period. However, a reasonable progress shall be shown for each year covered in a period, as determined by the Energy Bureau.

(c) ...

- (d) ...
- (e) ...
- (f) ...
- (g) ...
- ...”

Section 21.- Section 5 of Act No. 114-2007, as amended, is hereby amended to read as follows:

“Section 5.- Energy Metering.

Except when the applicable federal laws or regulations in effect expressly and specifically direct otherwise, the metering and accreditation process shall be as follows:

- a) ...
-

f) PREPA or the Contractor shall credit every participant of the Net Metering Program promptly and expeditiously. Such credit shall be clearly shown in the monthly bill for the next billing cycle, following the installation of the Meter, not later than thirty (30) days after having notified the certification of the distributed generator installed by a professional engineer or expert electrician, both members of their professional associations and admitted to the practice of their profession.

...”

Section 22.- Section 9 of Act No 114-2007, as amended, is hereby amended to read as follows:

“Section 9.- Public Policy on Interconnection.

It shall be the public policy...

Using the provisions of the SGIP as a model...

An engineer or an expert electrician...

The Authority, its successor, or the transmission and distribution network Contractor...

Nothing prevents the...

However, in the case of interconnected photovoltaic or renewable energy generation systems whose generation capacity does not exceed 25 kilowatts, the following shall apply:

(a) Photovoltaic or renewable energy generation systems registered in the renewables registry of Act No. 82-2010, whose generation capacity does not exceed 25 kilowatts shall be interconnected automatically to the transmission and distribution network. The systems shall begin operating automatically once a professional engineer or an expert electrician, both members of their professional associations and admitted to the practice of their profession and who are certified photovoltaic or renewable energy system installers, certifies the compliance thereof with the regulatory technical requirements for interconnection to the distribution network. It shall not be necessary to submit an application for interconnection in order for the systems identified herein to be deemed interconnected and to activate net metering.

...”

Section 23.- A paragraph (64) is hereby added to subsection (b) of Section 2.04 of Act No. 85-2018, to read as follows:

“Section 2.04.- Duties and Responsibilities of the Secretary of Education.

a. The Secretary shall be responsible for the effective and efficient administration of the Public Education System in accordance with the law, the duly-established education policy, and the public policy adopted by the Legislative Assembly and the Governor, in order to achieve the purposes set forth in the Constitution of Puerto Rico and in this Act for the Public Education System.

b. The Secretary shall:

(1) ...

...

(64) Add the subjects of Climate Change Mitigation, Adaptation, and Resilience to the school curricula at all levels.”

Section 24.- Section 5 of Act No. 83 of May 2, 1941, as amended, is hereby amended to read as follows:

“Section 5.- Powers and Authorities.

The Authority is hereby conferred, and shall have and exercise, the rights and powers necessary or convenient to achieve the aforementioned purposes, including the following:

(a) ...

(b) ...

...

(l) To propose and collect just, reasonable, nondiscriminatory rates and fees, and other charges approved by the Bureau, for the use of the facilities of the Authority, or for electric power services, or other commodities sold, loaned, or provided by the Authority, that are sufficient to cover reasonable expenses incurred by the Authority in the development, improvement, extension, repair, conservation, and operation of its facilities and properties, for the payment of the principal of and interest on its bonds, and for fulfilling the terms and provisions of the agreements entered into with or for the benefit of purchasers or holders of any bonds of the Authority and other creditors;

(m) ...

...

(y) ...

(z) To assist the Expert Advisory Committee on Climate Change created by the ‘Puerto Rico Climate Change Mitigation, Adaptation, and Resilience Act,’ when the Committee so requests it, in devising the Climate Change Mitigation, Adaptation, and Resilience Plan required by Section 9 of said Act.

The powers and authorities of the Electric Power Authority may be delegated and transferred as part of a Partnership Contract under the provisions of Act No. 29-2009 and Act No. 120-2018.”

Section 25.- Responsibility of Government Entities.

The departments, agencies, corporations, offices, and instrumentalities of the Government of Puerto Rico, and its municipalities, are hereby directed to support and collaborate with the Expert Advisory Committee on Climate Change in order to faithfully comply with the provisions of this Act.

Section 26.- Supremacy.

The provisions of this Act and the regulations or rules adopted thereunder shall prevail over any other provision of a law, regulation, or rule that is inconsistent with the former.

Section 27.- Severability Clause.

If any clause, paragraph, subparagraph, sentence, word, letter, article, provision, section, subsection, title, chapter, subchapter, heading, or part of this Act were held to be null or unconstitutional, the ruling, holding, or judgment to such effect shall not affect, impair, or invalidate the remainder of this Act. The effect of said holding shall be limited to the clause, paragraph, subparagraph, sentence, word, letter, article, provision, section, subsection, title, chapter, subchapter, heading, or part of this Act thus held to be null or unconstitutional. If the application to a person or a circumstance of any clause, paragraph, subparagraph, sentence, word, letter, article, provision, section, subsection, title, chapter, subchapter, heading, or part of this Act were held to be null or

unconstitutional, the ruling, holding, or judgment to such effect shall not affect or invalidate the application of the remainder of this Act to such persons or circumstances where it may be validly applied. It is the express and unequivocal will of this Legislative Assembly that the courts enforce the provisions and application thereof to the greatest extent possible, even if it renders ineffective, nullifies, invalidates, impairs, or holds to be unconstitutional any part thereof, or even if it renders ineffective, invalidates, or holds to be unconstitutional the application thereof to any person or circumstance.

Section 28.- Effectiveness.

This Act shall take effect on July 1, 2019.